

Customer No.: 31561
Application No.: 10/709,306
Docket No.: 12952-US-PA

REMARKS

Present Status of the Application

Claims 1-16 remain pending of which claims 1-3, 6-8 and 12 have been amended to more explicitly describe the claimed invention. Amendments to claims 1, 6 and 12 are fully supported at FIG. 4, paragraph [0036]. Therefore, it is believed that no new matter adds by way of amendment to claims or otherwise to the application.

For at least the following reasons, Applicant respectfully submits that claims 1-16 are in proper condition for allowance. Reconsideration is respectfully requested.

Discussion of the claim rejection under 35 USC 103

1. The Office Action rejected claims 1, 2, 12 and 13 under 35 U.S.C. 103(a) as being unpatentable over Admission (hereinafter AAPA) in view of Song et al. (US-6,215,541, hereinafter Song).

2. The Office Action rejected claims 3-5, 8-11 and 14-16 under 35 U.S.C. 103(a) as being unpatentable over Admission (hereinafter AAPA) in view of Song, and further in view of Matsumoto et al. (US-5,969,780, hereinafter Matsumoto).

3. The Office Action rejected claims 6-7 under 35 U.S.C. 103(a) as being unpatentable over Admission (hereinafter AAPA) in view of Matsumoto.

In rejecting the above claims, the Examiner states that AAPA discloses every features of the claimed invention except for three first contact holes. However, the Examiner relied upon Song to disclose three contact holes 74 for electrically connecting the

Customer No.: 31561
Application No.: 10/709,306
Docket No.: 12952-US-PA

scan line (24) and the redundant scan line (84). It would have been obvious to one skilled in the art at the time of the invention to modify the AAPA pixel structure to include the three contact holes (74) motivated by the desire to increase the reliability of contacts between pads and drivers.

Furthermore, the Examiner stated that AAPA fails to disclose a size of the contact hole in a range of 20 um to about a length of the scan line, however relied upon Matsumoto to disclose this feature. Therefore it would have been obvious to one skilled in the art to modify the pixel structure of the AAPA to include Matsumoto's contact hole by the desire to achieve a positive electrical connection.

Applicants respectfully disagree and traverse the above rejections as set forth below. Independent claim 1, as amended, is allowable over AAPA and Song for at least the reason that AAPA and Song substantially fail to teach or disclose each and every features of the claimed invention. More specifically, AAPA and Song substantially fail to teach, suggest or disclose a pixel structure comprising at least *[a dielectric layer, disposed between the scan line and the redundant scan line, wherein MORE THAN THREE first contact holes are formed in the dielectric layer, wherein the scan line is electrically connected with the redundant scan line through at least one or more first contact holes that expose a portion of the scan line]* as required by the amended independent claim 1. The advantage of the above features is that the possibility of faulty connection due to incomplete formation of one or two first contact holes in the dielectric layer can be effectively reduced.

Instead, Song, at FIG. 5, col. 6, lines 9-23, and also as admitted by the Examiner, substantially teaches ONLY THREE contact holes 74, and the longitudinal portion 84 is

Customer No.: 31561
Application No.: 10/709,306
Docket No.: 12952-US-PA

connected to the gate line connector 24 through the THREE contact holes 74. In other words, Song substantially fails to teach, suggest or hint a pixel structure comprising at least la dielectric layer, disposed between the scan line and the redundant scan line, wherein MORE THAN THREE first contact holes are formed in the dielectric layer, wherein the scan line is electrically connected with the redundant scan line through at least one or more first contact holes that expose a portion of the scan line], as required by the amended claim 1, instead Song substantially teaches ONLY THREE contact holes 74. Accordingly, Applicants respectfully submit that combination of AAPA and Song in a manner suggested by the Examiner cannot possibly render every features of the proposed amended independent claim 1 in this regard.

Furthermore, Applicants would like to point out that a patentable invention may lie in the discovery of the source of a problem even though the remedy may be obvious once the source of the problem is identified. The question here is whether the prior art recognized the cause of the problem. Inherency is not necessarily coterminous with the knowledge of those skilled in the art. Person of ordinary skill in the art may not recognize the inherent characteristics or functioning of the prior art. Thus, because Song fails to even mention any problems associated with the electrical connection between the scan line (or data line) and the redundant scan line (or the redundant data line) via the contact holes 74, and since Song merely discloses three contact holes 74 through which the scan line and the redundant scan line are electrically connected, therefore Song can not possibly suggest or hint using more (than three) number of contact holes would prevent faulty connections between the scan line and the redundant line. Accordingly, Song cannot meet the claimed invention in this regard.

Customer No.: 31561
Application No.: 10/709,306
Docket No.: 12952-US-PA

Furthermore, Applicants respectfully submit Claims 3-5, 9-11 and 14-15 specifies that the size of the contact hole in pixel structure, which is used for connecting the data line with the redundant data line, is in a range of about 20um to about a length of the data line. Matsumoto substantially teaches a method for Selectively Connecting A PLURALITY OF ELECTRODES (1) formed on a plastic film substrate to an EXTERNAL CIRCUIT (7) through the electrode connecting holes (2) formed an insulating layer, and therefore it is clear that Matsumoto substantially fails to teach a method of connecting the data line and the redundant data line (or the scan line with the redundant scan line) via a contact hole having a size of about 20 um or to about the length of the data line in a PIXEL STRUCTURE. Instead, Matsumoto substantially teaches a method for selectively connecting arbitrary ones of A PLURALITY OF ELECTRODES formed on a plastic film substrate to an EXTERNAL CIRCUIT. Therefore, because the purposes of the contact hole(s) of AAPA and that of Matsumoto are different, and therefore Matsumoto cannot possibly suggest one skilled in the art to modify the contact holes of AAPA (or Song), in a manner suggested by the Examiner.

Because the proposed independent claim 6, as amended, also recites features that are similar to the amended proposed independent claim 1, therefore Applicants similarly submit that claim 6 also patently defines over AAPA, Song and Matsumoto for at least the same reasons discussed above.

Furthermore, Applicants similarly submit the proposed independent claims 12 and 14, as amended, patently define over AAPA and Song (and Matsumoto) because AAPA and Song (and Matsumoto) fail to teach, suggest or hint a pixel structure comprising at

Customer No.: 31561
Application No.: 10/709,306
Docket No.: 12952-US-PA

least [a dielectric layer, disposed between the data line and the redundant data line, wherein more than three contact holes are formed in the dielectric layer, wherein the data line is electrically connected with the redundant data line through at least one or more contact holes that expose a portion of the redundant data line].

Claims 2, 7-8, 13 and 16, which directly or indirectly depend from the independent Claims 1, 6, 12 and 14 respectively, are also patentable over AAPA, Song and Matsumoto at least because of their dependency from an allowable base claim.

For at least the foregoing reasons, Applicants respectfully submit that claims 1-16 patently define over AAPA, Song and Matsumoto. Reconsideration and withdrawal of above rejections is respectfully requested.

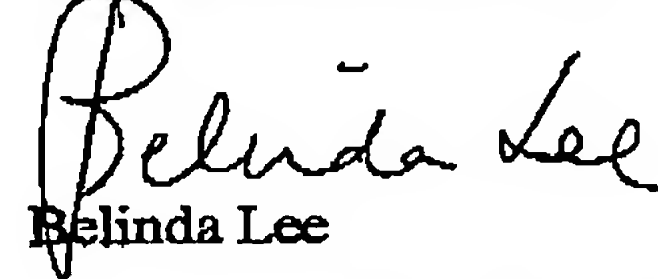
Customer No.: 31561
Application No.: 10/709,306
Docket No.: 12952-US-PA

CONCLUSION

For at least the foregoing reasons, it is believed that all pending claims 1-16 are in proper condition for allowance. If the Examiner believes that a conference would be of value in expediting the prosecution of this application, he is cordially invited to telephone the undersigned counsel to arrange for such a conference.

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Respectfully submitted,


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